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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,298	12/06/2001	Daniel Tapson	450110-03717	2646

20999 7590 02/24/2006

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EXAMINER

BHATNAGAR, ANAND P

ART UNIT	PAPER NUMBER
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2623

DATE MAILED: 02/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/006,298

Applicant(s)

TAPSON, DANIEL

Examiner

Anand Bhatnagar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12/27/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 2, 4-26, and 28-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-9, 13-26, and 28-30 is/are rejected.
- 7) ☒ Claim(s) 10-12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12/27/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/27/05 has been entered.
2. Applicant has amended claims 1, 2, 6-10, 12-15, and 17-26. Applicant has canceled claims 3 and 27. Currently claims 1, 2, 4-26, and 28-30 are pending. Claims 1, 2, 4-26, and 28-30 are pending.
3. Applicant's arguments, see remarks pages 9-13, filed 12/27/05, with respect to the rejection(s) of claim(s) 1 and 21 under 35USC 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Manjunath et al. (U.S. patent 6,332,030 b1). Examiner refers to the rejection below.

**DETAILED ACTION**

***Claim Objections***

4. Claims 4, 5, 13, 28, and 29 are objected to because of the following informalities: These claims are either directly or indirectly still dependent from

canceled claims (#3 or #27 respectively). Appropriate correction is required.

These claims will be addressed as best understood.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 2, and 4-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Regarding claim 1, applicant claims "an inverse transformer for transforming transform domain watermark data" while the specifications describe the transform step as an **inverse** transformation the limitation in the claim just states a process of transforming data. A process of transforming can be a forward transformation or a reverse transformation of data while inverse transformation is a reverse transformation only. As now amended examiner is unsure if the process is a forward transformation of data or an inverse transformation of data since now the same element is now called an inverse transformer carrying out a transformation of data and not an inverse transformation being performed while in the originally filed claim the same element was named a transformer which

also did the same transformation of the data. Examiner will address these claims as best understood.

Claims 1, 2, 4-26, and 28-30 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for embedding a watermark into a material, does not reasonably provide enablement for "embedding the pixels of said spatial domain watermark data with the spatial domain pixels of said material." The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

Regarding claims 1, 14, 15, 17, 18-21, 23, 24, and 26 the specification on page 1 lines 6-8 and on page 3 lines 17-19 describe the material being either audio, video, or data. If the material is either video or data then the data may consist of pixels which can be combined but if the material is only audio then there are no pixels in this type of data, i.e. therefore no pixels to be combined, and the watermark that will be embedded into audio data will not contain pixels since pixels are associated with images and not audio. Examiner will address these claims as best understood. Examiner refers to the rejection below.

#### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 4, 5, 13-26, and 28-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Manjunath et al. (U.S. patent 6,332,030 B1).

Regarding claims 1 and 21-23: Manjunath et al. discloses an apparatus comprising:

an inverse transformer (fig. 15 DCT transformer read as an inverse transformer) for transforming transform domain watermark data (fig. 15 the signature image is read as the transform domain watermark data) comprising a plurality of transform domain coefficients into spatial domain watermark data comprising a plurality of spatial domain pixels which form spatial domain watermark data (fig. 15 col. 15 lines 1-16, wherein the DCT converts the signature image coefficients from one spatial domain to a DCT converted spatial domain coefficients); and

a combiner (fig. 15 element 42, the encoder read as the encoder) for receiving material in the spatial domain the material comprising a plurality of spatial domain pixels and combining the pixels of said spatial domain watermark data with the spatial domain pixels of said material (fig. 15 the host image is read as the material) in the spatial domain to form watermark data embedded material (fig. 15 element 42 wherein the encoder combines the watermark image to the

host image. The host image and signature images are images therefore contain pixels).

Regarding claim 2: The apparatus wherein said inverse transformer receives said transform domain watermark data comprising a plurality of transform domain coefficients and transforms said transform domain watermark data into spatial domain data comprising a plurality of spatial domain pixels which form the spatial domain watermark data (fig. 15 col. 15 lines 1-16, wherein the DCT converts the signature image coefficients from one spatial domain to a DCT converted spatial domain coefficients).

Regarding claims 4 and 28: The apparatus wherein said material is one or more of audio material and video material (col. 1 lines 38-40).

Regarding claims 5 and 29: The apparatus wherein said material is data material (fig. 15 the host image is read as data material since all images are composed of data, i.e. pixels).

Regarding claim 13: The apparatus wherein said combiner arithmetically combines the pixels of said material and the pixels of said spatial domain watermark data (fig. 15 element 42 wherein the encoder combines the watermark image to the host image).

Regarding claim 30: A computer program product comprising software code for performing the steps of claim 21 when said product is run on a computer (abstract, col. 6 lines 52-67, and col. 8 lines 43-49, wherein a digital watermark is

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embedded into an image, i.e. since this is digital data then it is performed by a computer).

Regarding claims 14-17 and 24-26: The apparatus further comprising:  
a strength adapter for adapting the strength of the pixels of said spatial domain watermark data in dependence on the spatial domain pixels of said material, wherein said combiner arithmetically combines the spatial domain pixels of said material and said strength adapted pixels of the spatial domain watermark data (col. 6 lines 52-67 and col. 7 lines 1-32, wherein the scaling factor scales the coefficients of the host and signature images in order to embed the watermark).

Regarding claims 18-20: They are rejected for the combination of reasons for claim 1 and 14-17.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Manjunath et al. (U.S. patent 6,332,030 B1).

Regarding claims 6-9: The apparatus wherein said transform domain watermark data comprises a Pseudo Random Symbol Stream modulated by

information to embed in the material. Manjunath et al. discloses to embed a signature image into a host image. Manjunath et al. does not teach to have the signature image/watermark be a Pseudo Random Symbol Stream, a UMID, nor a digital bitmap. All of these elements are well known in the art of watermarking to include into watermarks. Examiner takes OFFICIAL NOTICE.

***Allowable Subject Matter***

8. Claims 10-12 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

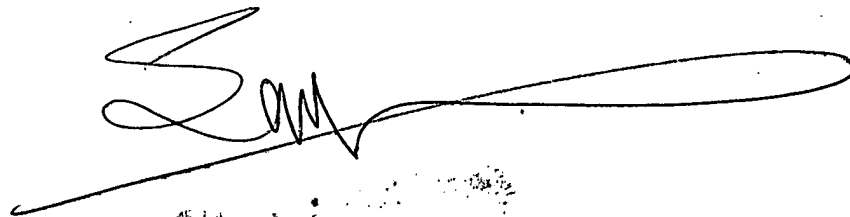
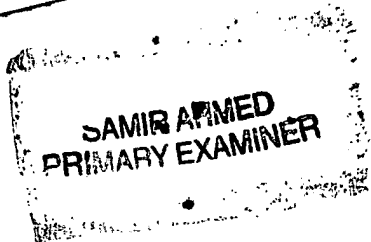
Cox et al. (U.S. patent 6,154,571) for a digital watermarking method wherein the watermark is combined with the image and then processed through a Inverse DCT.

***Contact Information***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anand Bhatnagar whose telephone number is (571) 272-7416, whose supervisor is Jingge Wu whose number is (571) 272-

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7429, Central fax is 571-273-8300, and Tech center 2600 customer service office number is 703-306-0377.

Anand Bhatnagar

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February 16, 2006